

DETERMINATION OF A CHEMICAL FORMULA**Experiment 8****Data:**

Mass of empty flask	
Mass of flask + zinc	
Mass of flask + zinc + iodine	
Mass of flask + unreacted zinc	
Mass of empty beaker	
Mass of beaker + product	

Calculations:

	<i>Answer</i>	<i>Show Work</i>
Mass of iodine that reacted		
Moles of iodine that reacted		
Mass of zinc that reacted		
Moles of zinc that reacted		
Mass Ratio: Iodine/zinc		
Mole ratio: iodine/zinc		
Mass of zinc iodide reaction product		
Total mass of reactants (zinc + iodine)		

Questions:

1. Which of the following ratios can be used to determine the formula of a compound between elements X and Y? (Circle all that apply)

$$\frac{\text{mass of X}}{\text{mass of Y}}$$

$$\frac{\text{atoms of X}}{\text{atoms of Y}}$$

$$\frac{\text{mol of X}}{\text{mol of Y}}$$

2. Briefly describe how can you visually tell when the reaction between the reagents in this experiment has been completed?
3. What is present in your reaction flask at the end of the reaction? Give name or write formula for each substance.
4. Compare the mass of the zinc iodide reaction product collected at the end of this experiment with the mass of zinc and reacted iodine that were used as reactants at the beginning of the experiment. Calculate the % difference between the two masses.